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Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 163



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ANALYST DISCUSSES PROBLEMS OF NUCLEAR DEVELOPMENT

Madras THE HINDU in English 1 Aug 82 p 2

[Article by G.K. Reddy]

[Text] Once again Tarapur is in the news, but this time with a difference. After the prolonged stalemate that followed the breakdown of negotiations a compromise has been reached to meet the essential requirements of both India and the United States.

The latest accord, bringing France into the picture as an alternative supplier of enriched uranium under the existing safeguards has been worked out in a spirit of mutual accommodation. The U.S. has realised, better late than never, that India cannot be pushed around beyond a point. India, in turn, saw no great advantage in insisting on a break of the existing safeguards if it is going to submit to the same under different auspices.

Caste System

The safeguards that are applied to the Soviet-supplied heavy water with the so-called pursuit clause, are far more stringent than what is provided for in the Tarapur agreement. It is highly unlikely that France would agree to anything less than what is currently applicable at any of the IAEA supervised nuclear installations.

The proposed compromise fully vindicates the Indian contention that the U.S. cannot go back on its contractual obligation to supply the fuel and yet insist that the safeguards must continue even after the termination of the agreement. But after the U.S. has come forward with the offer of ensuring the continuity of fuel supply through a third country to meet Tarapur's essential requirement, there is no point in re-negotiating the inspection procedures and submitting in the bargain to stricter conditions.

There are no great legal hurdles to the induction of France as a proxy supplier within the framework of the 1963 agreement. It will mean that the U.S. shall continue to bear the primary responsibility for ensuring the supply of fuel from an alternative source.

Open Secret

The Tarapur episode will have served a loftier purpose than merely resisting the American pressures if it can also lead to some introspection on India's part whether the country has been handling its nuclear policy with the necessary clarity and positive purpose. It cannot be said that by simply refusing to knuckle under U.S. blandishments India has in any way reduced its dependence on the Big Powers for sophisticated equipment or access to scientific advances to enhance its own nuclear self-reliance.

It is, on the contrary, an open secret that the country's nuclear power programme has suffered a serious setback because those in authority failed to comprehend fully the magnitude of the technological problems that had to be coped with in the wake of Western non-cooperation.

The Indian nuclear programme had been plagued from the very beginning by a strange combination of starry-eyed idealism and hard-headed realism. The country's nuclear scientists who made impressive strides in their research programmes were often quite perplexed by the confusing talk of self-abnegation that was mistaken for self-assertion. The Indian nuclear rhetoric ranged from abjuring the option for all time to a more qualified renunciation of the right for the present.

The decision to go in for the Pokhran test explosion in 1974 did not make much sense if it was not backed by a firm resolve to carry forward the experimentation for taming the atom and mastering its peaceful uses. The Government backed out of further tests in the face of well orchestrated international criticism.

Slowed Down

The result is that the country's nuclear programme has been slowed down in the last eight years and the two power plants at Tarapur and Rajasthan and the others under construction elsewhere are either operating on a reduced scale or delayed by frequent interruptions in the construction schedules due to shortage of materials and poor coordination. The Janata Government did the greatest harm in not only curtailing even the research activity but also destroying the whole sense of direction.

The nuclear establishment which was riven by its own factional feuds was quite unprepared to absorb this shock and retain the requisite resilience in sustaining its own morale in these trying circumstances. It goes to the credit of these gallant scientists that they have not taken long to regain the lost initiatives and restore the missing momentum.

It cannot be argued with any measure of conviction that India would be less responsible than the two super powers or the middle range nuclear powers like China, Britain and France in using knowledge in the nuclear energy field with the utmost care and caution.

Immediate Task

The more immediate task of the Government in providing the right kind of political direction to the country's scientific establishment is to avert the proliferation of too many commissions, councils and departments with each one functioning as an autonomous empire.

The Prime Minister who is well aware of the institutional and individual conflicts cramping them has been trying to restore some degree of order by placing a senior Cabinet Minister in overall charge of them. The junior Ministers looking after different scientific departments have not been able to assert themselves since the heads of these institutions consider themselves accountable only to the Prime Minister who happens to be their Minister at present.

The absence of closer inter-departmental coordination at the ministerial level has also cramped the style of Indian negotiators in dealing with the Tarapur question since they tended to look at it from different angles with no clear perception of the country's fallback position in settling it. The top officials in Delhi do not believe, for example, that the Atomic Energy Commission has developed the mixed oxide fuel to the stage of running Tarapur exclusively with it. The scientists by the same token continue to entertain strong reservations about the Government's ability to resist the Western pressures beyond a point.

Another big problem in giving the scientific community a new ethos and insulating it from the vagaries of political patronage is the glaring unevenness of its growth and development. It is not a uni-dimensional society with some uniformity of professional standards and administrative competence. The space scientists and atomic experts can rank with some of the best in the world with their passion for perfection, but those running the power plants, telephones or public transport have no such sense of involvement. It is a sad commentary on the state of the nation that there is no sense of public outrage over the daily power cuts, chronic water shortages, erratic telephones, breakdown of public vehicles and poor quality of manufactured goods which give the country a bad name.

The nation needs a scientific temper, the ability to think rationally with a determination to stem the rot and set things right. The country has great faith in the capacity of its educated youth, especially the scientists to make rapid strides given the right leadership with a proper sense of direction. Any impressive progress made in the atomic field and the inter-related space technology gives the country a feeling of pride which can help to dispel some of the apathy that has become an integral part of present-day Indian life.

And it is in this context more than anything else that the Government should provide every possible encouragement to its scientists to produce quicker results and prove themselves worthy of the confidence reposed in them.

CSO: 5100/7134

'INDIAN EXPRESS' EXAMINES TARAPUR NEGOTIATION PROCESS

BK211430 Delhi INDIAN EXPRESS in English 12 Aug 82 p 6

[Article by C. Raja Mohan: "The Turnabout on Tarapur"]

[Text] It is necessary to take a hard look at the Tarapur agreement reached in Washington last week. The agreement to bring in France as a third party to supply fuel to Tarapur, under the Indo-U.S. nuclear arrangement of 1963, and the disagreement over reprocessing of spent fuel could have serious consequences for the Indian nuclear programme. Given the fact that the details of the three rounds of Indo-U.S. negotiations on Tarapur during April, July and November last year are now available, it certainly appears that there is a complete turnabout in the Indian position. The United States has successfully divested itself of the obligation to supply fuel to Tarapur, ensured that safeguards on the plant and the spent fuel would continue, and postponed a decision on reprocessing. Thus all the U.S. objectives when the negotiations began seem to have been achieved.

The position of the Indian delegation, led by Dr H. N. Sethna, and consistently put forward by him, was that if the U.S. cannot supply fuel under the 1963 agreement, India would be free to make its own arrangements. The agreement would have to "stand or fall as a whole"; if there is no supply, there would be a "clear, sharp break." During the negotiations when the U.S. suggested bringing in a third party to supply fuel under the 1963 agreement, India firmly rejected it. India had already had independent offers from the Soviet Union and France to supply fuel, in case the U.S. reneged on its commitments. However, India chose to decline these offers because the Department of Atomic Energy was well on its way to completing the development of an indigenous fuel called MOX (mixed oxide fuel). At an investment of Rs 35 crore and with invaluable efforts of Indian scientists, the MOX process was perfected. Indeed, a decision at the cabinet level seems to have been taken to use MOX if the U.S. stopped supplies. Parliament and people were repeatedly assured by the prime minister and Dr Sethna that this would be the Indian course of action.

It also appears that at one stage during the negotiations the U.S. was reconciled to an orderly termination of the agreement. Mr James Malone, leader of the U.S. delegation, gave the assurance that U.S. would not press India on the reprocessing issue. It was widely assumed that the agreement was dead. All it needed, as the external affairs minister told parliament in July last,

was a "decent burial." However, on the eve of the last round of negotiations in November, a fresh twist came with the U.S. insistence on bringing in a third party. The U.S. was against the termination of the agreement. The U.S. also indicated possibility of economic sanctions, in case India broke the agreement. India also had to consider possible termination of assistance through multilateral institutions. The U.S. refusal to supply spare parts was also a factor in India's calculations.

The first indication of a substantive change in Indian position came from the prime minister's speech to a parliamentary consultative committee in December 1981. She said that any decision on Tarapur would have to be taken in the context of the "overall bilateral relations with the U.S." The new opportunity was grabbed with alacrity by the U.S. administration and the present arrangement was finally worked out.

The Tarapur accord and the way it was arrived at signifies a deeper change in Indian nuclear policy-making. Throughout the last 30 years, India decided on its nuclear policy, irrespective of the positions of the big powers on the issue, or its own relations with the big powers. It is difficult to brush aside the allegation that the Tarapur issue was decided not on its inherent merits, but against the background of relations with a major power. This in spite of India having a perfect legal case on the supply and an indigenous technology to relieve it from foreign dependence. The impact on the morale of our scientific community within and outside the DAE cannot but be depressing.

The resurrection of a near-dead treaty with a new French connection could cause more problems than it may solve. First, the Indian experience with France in the nuclear field has been none too happy. The involvement of France in the heavy water plant at Baroda has been almost disastrous. The agreement with France for supply of highly enriched uranium to India's first breeder test reactor (FBTR) under construction at Kalpakkam has run into problems. France is yet to be persuaded to honour its commitment. Second, is there an assurance from France that in its new role, it would not insist on London Club safeguards to which it is committed by being a member of the club? The club safeguards are tougher than those presently applicable to Tarapur. Through a "pursuit clause," the new safeguards would only mean bringing full-scope safeguards through the backdoor. Third, given the experience with the U.S. can India be sure that a future change in the French non-proliferation policy would not affect Tarapur? Fourth, on the issue of spare parts India should demand that France take up the responsibility to acquire and supply them to Tarapur. Unless France can be persuaded to do this, India would continue being subject to U.S. leverage on Tarapur. The way these issues, particularly the one concerning safeguards, would be resolved has not been cleared by the pronouncements of the French foreign minister, Mr Cheysson, during his recent stop-over in New Delhi.

If the manner of resolution of the fuel supply question has been a strange one, that of handling reprocessing can only be described as tragic. Even as the Tarapur accord was being hailed, Indo-U.S. differences on reprocessing came out loud and clear. At a fundamental level, it is astounding that the issue

was not clinched as part of the Tarapur deal. The unseemly haste with which the accord was announced leaving reprocessing in a limbo is certainly surprising. At the diplomatic level, India yielded on a number of counts: not to terminate the 1963 agreement; not to use indigenous technology; not to undertake PNES [peaceful nuclear explosions] at least in the "current time frame." Yet the United States was not willing to concede India's legitimate right to reprocess.

The decision to keep open the issue of reprocessing cannot be justified on any interpretation of the 1963 agreement. The term "joint determination" in the agreement refers only to the safeguardability of the reprocessing plant and does not confer a "prior consent" or "veto right" on the U.S. In fact, this Indian interpretation was never contested by the U.S. until 1975. The process of joint determination was initiated by India in 1968, when it submitted the design of the Tarapur reprocessing plant to the U.S. Atomic Energy Commission. The USAEC indeed testified that it was safeguardable. When the plant was completed in accordance with the submitted designs, the U.S. team visited the plant. But the U.S. began to stall the process of completing the formality of "joint determination." India has also concluded, in 1980, a safeguards agreement with the IAEA for the reprocessing plant. This should have dispelled any doubts about India's peaceful intentions with respect to Tarapur spent fuel.

The withholding of the reprocessing right might cause considerable damage to the Indian nuclear programme. Reprocessing from the outset has been an integral part of the Indian nuclear programme. Three consequences of the delay in reprocessing are obvious: First, the plant built at an expense of Rs 80 crore is lying idle since 1975 and will continue to be so. Second, a major way of easing the strain of spent fuel management is reprocessing; it would have to be postponed. Third, given the problems with the French fuel supply to the fast breeder test reactor at Kalpakkam, Indian nuclear planners were banking on using plutonium fuel. If reprocessing is held up, it is unlikely the FBTR can be commissioned when it is ready next year.

Under the Carter administration the U.S. was opposed to reprocessing. The Reagan administration attacked this policy of universal opposition. The new argument is that "responsible" states like those of Western Europe and Japan can be trusted with reprocessing. But "irresponsible" states of the Third World cannot be. In line with this reasoning, the U.S. gave permission to West Europeans and the Japanese to reprocess only a few weeks before the Tarapur agreement was reached.

This discrimination is perhaps nothing when compared to the crowning irony of the U.S. decision to use spent nuclear fuel from its civil programme for weapons. The U.S. requires large amounts of plutonium for its strategic nuclear weapons modernization programme. The Sipri Yearbook 1982 reveals that the U.S. has developed a unique laser technology to convert spent fuel into nuclear bombs. Thus, if there is one country planning to convert the

from for peace into the atom for war, it is none other than the U.S. This exposes the American policy on reprocessing. It also vindicates India's long-standing criticism against imposing safeguards on non-nuclear powers and leaving nuclear weapons powers scot free. But the tragedy is that even as the Indian criticism is being proved, India itself has succumbed to external pressures and mortgaged its freedom of action in its nuclear programme.

(142) 100/7149

NEW DELHI CONSIDERS FRENCH ENRICHED URANIUM DELIVERY CONDITIONS UNACCEPTABLE

CITE LE MONDE in French 26 Aug 82 p 6

[Article in Patrick Frances: "New Delhi Considers the Conditions Set by France on Enriched Uranium Deliveries to be Unacceptable"]

[Text] New Delhi: Judging by the articles and editorials published recently in the local press, the satisfaction and optimism generated in India by Mrs Gandhi's announcement during her trip to Washington that France had agreed to step in for the United States as supplier of enriched uranium for the Tarapur nuclear plant (LE MONDE 30 July) seem to have given way to scepticism and even a kind of bitterness in the Indian capital.

This bitterness stems from an interpretation of remarks made in New Delhi recently by the French minister of foreign affairs, Mr Claude Cheysson (LE MONDE 10 August) namely that France did not intend to impose special conditions on India for the deliveries, which would be subject to the same guarantees as those set forth in the Indian-American agreement of 1963; some even thought that the control would be less strict than that imposed by the United States or the Soviet Union. This interpretation was probably overoptimistic. It has been proved invalid according to the Indian press, because the proposals recently communicated to the Indian government by the French charge d'affaires invited New Delhi to sign an agreement on the control of nuclear fuel and its by-products with the International Atomic Energy Agency (IAEA).

According to a usually well-informed Indian journalist, the Indian government was not surprised at what some people promptly called an "about-face." This term was vigorously rejected by the French, who say that the minister's remarks and the proposals that have been made are in perfect harmony. Some commentators attribute this "about-face" to pressure on Paris from the Vienna agency, the explanation being that the agency was concerned that no exception be made in the case of India, which has not signed the non-proliferation treaty, and that the provisions introduced since 1963 be required. These provisions involve, for example, the continued supervision of by-products that might be used in other installations, and continued inspection rights after the contract expires. These two provisions are indeed said to be present in the document sent by France.

in New Delhi, anything that deviates from the 1963 Indian-American agreement (which the Indians say that France agreed at the end of July to write into its contract), that is, anything that requires further guarantees would be quite simply "unacceptable."

Also, Indian officials are reported to have informed the American charge d'affaires in New Delhi immediately, telling him that such an attitude would endanger the compromise that had been achieved. India would thus feel obliged to cancel the 1963 agreement, which, it has always felt, would leave it free to reprocess waste from the Tarapur plant¹ and use it as it sees fit, whereas if India made an agreement with France, it would have promised not to do that.

An Inconvenient Baby

Some commentators point out that this discordant note might have negative consequences for Franco-Indian relations, which have shown unmistakable improvement since Mr Mitterrand took office: substantial contracts have been signed.

However, New Delhi does not want to let the dispute get heated and at present refuses to get embroiled in an argument with Paris. But the HINDUSTAN TIMES editorialist wrote on Monday 23 August that France would be wrong to think it can impose conditions on India, which, he says, "has more than one card in its hand." Nor should it be forgotten that "the future of the French military aircraft industry depends largely on New Delhi's purchase of the Mirage 2000." In other words, "No uranium on our conditions, no Mirage 2000."

In New Delhi, the French refused to comment on articles appearing in the press, thus leaving the ball in the Indian court.

The General director of Cogema [Nuclear Materials General Company] is expected in New Delhi at the end of the month. The fact remains that since the agreement was announced in Washington, Paris has stated that the contract would be signed only if India respected the controls set by the Vienna agency. Then too, there is France's membership in the "London club," which includes the major atomic powers and sets forth some rules of conduct for them to follow in dealing with third parties. Finally there is an impression, which has been stated in colorful terms by an informed observer, that "in this case, France seems to have found a baby left rather inconveniently on its doorstep."

In some Indian circles it is felt that New Delhi has overoptimistically underestimated the obstacles to be overcome in getting out of the impasse created by the Americans' leaving the game and in getting uranium deliveries started up again quickly. These people frankly oppose the policy followed thus far by Mrs Gandhi's government, because they feel it puts India in a position of being much too dependent on other countries.

FOOTNOTES

1. According to the 1963 agreement, irradiated fuel cannot be used except by joint agreement. New Delhi says that this provision no longer applies if Washington is no longer able to fulfill its commitments.
2. French officials refuse to comment on this "blackmail" and pointed out that the letter of intent signed by the Indians for the eventual purchase of 40 planes (and accompanied by a single downpayment) was in itself a kind of contract that would be extremely hard to back out of.

8782

CSO: 5100/5703

BRIEFS

MAURITIAN DIEGO-GARCIA CLAIM SUPPORTED--India supports Mauritius' "legitimate claims" to Diego Garcia, Mrs Gandhi declared in a speech delivered to the Mauritian parliament on Tuesday 24 August. On a state visit to Port Louis 23-25 August, the Indian prime minister expressed "her sympathy" for the inhabitants of Diego Garcia moved to Mauritius to make room for a U.S. air and naval base. The new government of Mauritius is asking for the return of the Chagos archipelago--including the island of Diego Garcia, which was detached from Mauritius by Great Britain in 1965. The new Mauritian head of government, Mr Jugnault, insisted on the "necessity of demilitarizing the Indian ocean, a region where the presence of the superpowers is a source of anxiety." (AGENCE FRANCE-PRESSE, REUTERS). [Text] [Paris LE MONDE in French 26 Aug 82 p 6] 8782

CSO: 3100/5703

BRIEFS

NEUTRON GENERATOR--The Bolivian Nuclear Energy Commission's (COBOEN) neutron generator in Viacha will begin operations around the end of September. Tibor Stariskay, a Hungarian specialist, has arrived in this country for a 2-months stay during which he will make the necessary adjustments to the generator so that it can commence operations definitively. The generator will serve other decentralized government institutions. The National Smelting Enterprise will be the first to benefit after it begins to operate. ENAF [National Smelting Enterprise] and COBOEN have signed a contract whereby there will be a detailed control of waste in heat-resistant ores in the smelting furnaces at Vinto, in the department of Oruro. In addition, Mr Ampuero said that the governing agency and the International Atomic Energy Organization have signed a group of agreements which will permit greater cooperation with COBOEN within the sphere of its activities. [Text] [La Paz EL DIARIO in Spanish 11 Aug 82 p 5] 8735

CSO: 5100/2241

FEDERAL REPUBLIC OF GERMANY

STATE SECRETARY ON SAFETY, WASTE STORAGE POLICY

Duesseldorf ATOMWIRTSCHAFT/ATOMTECHNIK in German Jun 82 pp 314-317

[Article by A. von Schoeler: "On the Safety and Waste Management Policy of the BMI (Federal Ministry of the Interior)"; words enclosed in slant-lines printed in italics]

[Text] From the address by the Parliamentary State Secretary of the Ministry of the Interior at the final session of the JK '82 [Annual Nuclear Technology Convention] on 6 May 1982.

Principles of Safety Policy

Technical safety and legal safety are permanent development objectives of the Federal Government. Protection of the lives and health of the population from nuclear energy hazards has priority over economic points of view for the Federal Government. Necessary safety measures must not be omitted for reasons of cost. If someone came out with the sentence "Energy supply is safe only if it is economical" here at your conference, then I would add: In the long run nuclear power plants will be economical only if they are safe. I again stress: there must be no weighing of alternatives between costs and unacceptable risks.

The risk determines the measure of safety, and not the price. These principles do not constitute a policy of boundless exaggerated impositions with the ulterior motive of foiling nuclear energy indirectly.

Safety Requirements for Biblis C, Isar-2 and Emsland

To say it very clearly: In taking a position on the Biblis C, Isar-2 and Emsland nuclear power plants, Federal Minister /Baum/ has convinced himself in detailed conversations with all employees that the impositions made rest on the state of science and technology, which is put in concrete terms by the safety criteria of the BMI, the recommendations of the Reactor Safety Commission, or the regulations of the Nuclear Technology Committee. Despite assertions to the contrary, there have been no surprising, novel impositions: the safety requirements were the result of continuous development since 1977. Too, there is no disagreement here with the licensing authorities in

Bavaria, Hesse and Lower Saxony. The Federal minister of the interior and the licensing authorities of the Laender concerned are in agreement on which technical safety measures are required.

There is an argument among the lawyers as to which legal regulation the technical safety measures stem from. However, even the lawyers agree that the measures as a whole can be derived from the Atomic Energy Law and the Radiation Protection Ordinance. The argument is thus purely academic and changes nothing in the result.

I again stress: What is demanded is a standard of safety recognized according to the principles of science and technology--no more, no less.

The popular reproach about an investment back-up which is directed at the Federal Government, and in particular at the minister of the interior, is incorrect. There is no project for which the license for a new nuclear power plant is still due because a decision by the Federal minister of the interior is lacking. To say it quite clearly: Nothing has been delayed at the office of the Federal minister of the interior, and nothing is being delayed.

And here I want to say the following with regard to an address which was delivered here the day before yesterday: If representatives of the Laender give a different impression, they do this while knowing better. The Federal Government has discussed the possible reasons for procedural delays in licensing the construction of nuclear power plants in detail with the Laender and with industry. It has--as announced in the government declaration of 24 November 1980--submitted measures to accelerate licensing procedures. The list of measures has been agreed upon with the Laender.

The amendment of Atomic Energy Law procedural organization by the Federal minister of the interior contributes to making the agreed-upon measures effective. As he has done up to now, the Federal minister of the interior will continue to use his influence to promote the safety of nuclear technology installations, in close cooperation with the Atomic Energy Law authorities of the Laender.

Federal Supervision

The Federal minister of the interior has charge of "federal supervision" of the Atomic Energy Law licensing and supervisory authorities of the Laender. Federal supervision means: to observe execution by the Laender and through directives to intervene correctively if, in the view of the Federal Government, there is deviation from the standards of legality and usefulness provided.

From this it follows that management on behalf of the Federal Government is management by the Laender, not federal management. In licensing nuclear technology plants the Laender must, in addition to Atomic Energy Law regulations, pay heed to a multitude of further laws and must deliver further licenses which fall within the scope of the Laenders' own management.

The job of the federal minister of the interior is to:

1. Guarantee national execution of the Atomic Energy Law and ordinances enacted on the basis of the Atomic Energy Law.
2. Support the Laender in resolving fundamental technical safety and, in individual cases, particularly relevant questions.
3. Adapt the required damage precautions to the latest state of science and technology so as to realize the principle of a dynamic fundamental law protection as postulated in the Kalkar decision by the Federal Constitutional Court.

This is possible only by close cooperation with the Laender, with full preservation of their autonomy at the same time. The cooperation carried out up to now has proven its worth. Here it has worked out well for many years: that, for the licensing of nuclear technology plants, the Federal minister of the interior submits two fundamental statements within the scope of federal supervision, namely, one before the first partial construction license and the other before the first operating license. Over and above that, there are current contacts during the entire licensing procedure with the authorities of the Laender but also with others participating in this process. The implement of federal supervision is not used according to the rules of command and obedience. Even here, what is decisive is convincing arguments and not formal positions.

Federal supervisory statements do not drop out of a clear sky. Subtly differentiated and responsible examination of technical nuclear safety questions proceeds in close dialogue with the licensing authorities and the experts.

RSK and SSK

Over and above this, the Federal minister of the interior consults the /Reactor Safety Commission (RSK)/ and the /Radiation Protection Commission (SSK)/. The basic task of the RSK and SSK is to work out recommendations which aim at a high standard of safety and advance technical safety problems. Therefore, the only things that count for appointments to the consulting committees are independence and qualifications in scientific subjects.

The RSK and the SSK, this I wish to emphasize in particular, have contributed very significantly with their consulting activity to the high safety standard attained by German nuclear energy, and in doing that have always demonstrated technical expertise.

Their task, however, always remains consultative. They cannot relieve the Federal minister of the interior of his political responsibility. Therefore, the minister alone has to decide on federal supervisory statements and to be responsible for them legally as well as politically. The Federal

minister of the interior stands by this responsibility, and all the more so when approaches about unjustifiable safety impositions are made from one quarter, while from another come criticisms that safety requirements are not nearly stringent enough.

Exaggerated Safeguards Mentality

Careful examination of the licensing prerequisites means: assuring safety from dangers which reasonably, according to common sense, must be taken into account; this means safety in practice, not on paper. For the experts as well, this calls for readiness to take responsibility.

A mentality of safeguards and exemption from liability, the consideration of only hypothetical limiting conditions and incidents and the bureaucratically inflated accumulation of certificates and records often create only an illusion of safety. Too, an article by a single scientist does not automatically create a new state of the art in science and technology.

Exaggerated Criticism

No one can take seriously scare stories such as are being spread at present on the basis of the Heidelberg Study. In the neighborhood of the Neckarwestheim I Nuclear Power Plant, malformation rates of the newborn supposedly have increased by 100 to 200 percent.

Last week in the Bundestag I described these assertions as scientifically not to be taken seriously.

It is not very helpful either for the Greens to be saying publicly in the Baden-Wuerttemberg Landtag right now that the technical safety prerequisites for a partial construction license for Neckarwestheim II are not being met, without even knowing the intended safety precautions and impositions by the licensing authorities.

Here all I can do is to emphasize that the consultations have not yet been concluded. The Federal Government and the Laender will make their decision not on the basis of preconceived opinions, but after careful examination of all documents, just as was done in connection with Biblis C, Isar-2 and Fastland. Therefore, the Federal minister of the interior stands in defense of his employees who are being attacked with a supervision complaint and accused personally and in public by the Hesse Land Section of the Federation for Protection of the Environment and Nature for not having proceeded carefully and responsibly in making the statement on Block C of the Biblis Nuclear Power Plant.

Legality

Even several years ago the call for more "legality" in the requirements to be set by Atomic Energy Law licensing procedures became known. In view of the numerous opposition proceedings in the administrative law courts, many people wanted the licensing prerequisites in the Atomic Energy Law or

in ordinances to be put in more concrete terms in order to make the result of such legal proceedings more predictable. In the meantime, detailed legal ordinances and technical requirements have been drawn up or written down. On the other hand, the increasing number of decisions of the Supreme Court gives a clearer picture of previously controversial legal and factual questions.

Nevertheless, the call for more legality is recently again increasing in volume and frequency. To be sure, the reason given now is that an excessive amount of bureaucratization must be cut back. Truly overwhelming proof is presented in support of this. The extent of licensing documents and certificates is no longer to be measured in pages, but now in tons of paper.

I do not think much of such general claims. Abstract demands are of use to no one. Anyone who wants to eliminate deficiencies instead of merely "passing the buck" should present concrete, realistic improvement proposals. And he must also pay attention to the Kalkar decision of the Federal Constitutional Court, according to which safety must be oriented along the principles of protection of "dynamic basic rights."

Reactor Safety Ordinance

It is not to be misunderstood: A reactor safety ordinance as demanded by the opposition in the Bundestag is certainly possible under constitutional law. That is not the point. However, I do not see a need for more regulations in addition to the numerous legal rules already in existence. Typically, also, there is a lack of detailed proposals for the reactor safety ordinance. Anyhow, a "freezing of the safety standard" is not a realistic proposal. It would be /useful/ to a few--but /harmful/ to many.

It is with good reason that the Atom law lays down the development of nuclear technology safety for us. The German nuclear technology plants, while not the cheapest, are among the world's safest. In the past what was necessary was done to make possible a balance between definition of the necessary requirements and flexibility in their application. This will be the case in the future.

Waste Management

Waste management is for many the Achilles' heel of peaceful use of nuclear energy.

For others, on the other hand, the waste management policy of the Federal Government is exaggerated, in particular the coupling of additional construction of nuclear power plants with the solution of the waste management question.

What matters here is this: Expansion of nuclear energy and waste management must run hand in hand. At the beginning of nuclear energy use, however, all waste management facilities do not have to be fully proved and

ready to operate. Technical safety is served more sensibly if the necessary waste management facilities are constructed in accordance with the actual waste management need. Only then can developments taking place in the meantime in science and technology be converted into a gain in safety and reliability. This, however, does not mean that we can do without appropriate waste management provisions in the hope that future generations will solve the problem. Concrete facts must be available which allow the justified conclusion that the necessary waste management facilities will be usable on time.

Therefore, the waste management policy of the Federal Government--and in this question it is in complete agreement with the Laender governments--considers the assured guarantee of effective waste disposal in nuclear power plants one of the indispensable prerequisites for the future use and the further extension of nuclear energy. We wanted--let me say this with special emphasis--this condition and we will hold on to it unwaveringly.

The policy of the Federal Government is expressed clearly for everyone in the 28 September 1979 resolution by the heads of government of the Federal and Land Governments on waste management for nuclear power plants and the principles supplementing this resolution. These documents contain the yardstick with which progress is measured.

Waste management is not the duty of an individual group only. Responsibility for assured waste management concerns us all--first of all, industry, according to the principle of cause [and effect]. However, the Federal Government also bears responsibility, namely, for the permanent storage of radioactive wastes. And responsibility for waste management is also borne by the Laender--for the installation of land collecting points and also for licensing procedures for the permanent storage facilities to be constructed.

Progress in Waste Management Planning

The Federal Government stands by its responsibility:

--In August of this year we shall make the plan assessment application for permanent storage of weakly radioactive waste and waste from the shutdown of nuclear technology installations in the former Konrad ore mine. According to present planning, storage is expected to begin in 1988.

--Work on exploration of the Gorleben salt dome is proceeding on schedule. At this time the first shaft primary boring is being sunk. Storage of radioactive waste will if suitable be possible approximately toward the end of the 1990's.

--In spring 1983 the Federal Government will decide about progress at the Asse. If the investigative results available up to then permit, a modified plan assessment application can be made which will make possible the storage of radioactive wastes starting in 1988.

However, there also is progress in waste management provision in other areas:

Thus, all legal construction licenses are available in the meantime for the /Gorleben temporary storage facility/. The beginning of storage of irradiated fuel elements in containers is expected in 1984.

For the /Ahaus temporary storage facility/ this is to be possible as of the mid-1980's.

Hesse, Bavaria and Rhineland-Palatinate are prepared to contribute to progress on /reprocessing/, an essential element of the integrated waste management concept.

In accordance with the resolution of the heads of government of Federal and Land Governments, we are also examining /direct permanent storage/ of fuel elements without reprocessing. This results, on the one hand, from the realization that this handling of irradiated fuel elements can be the most useful process in particular cases.

On the other hand, we do not want any apparently realistic possibility in the area of waste management not to be examined.

With all the progress achieved up to now, there is no cause for euphoria. In past years, despite promising attempts, we have experienced many reverses. In the future as well, reverses cannot be ruled out. The effort of all participants is needed for reliable waste management. The Federal Government will make its contribution to this. You can depend on it.

I Am Open to Correction of my Position

Allow me in conclusion a personal remark. I am aware of having said, and having had to say, some things on which we have a different view. This will be unavoidable in the future as well. The reason for this is the differences in the tasks which we perceive. If manufacturers, operators, experts and authorities always agreed, then doubts as to the ability of the system to function would be justified.

However, even for different tasks we must try to mutual understanding. We must not defame one another.

We must remain prepared to analyze our position critically and even to correct it in case of factually convincing arguments. For this we should all be open.

I for one am ready for it.

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050: 3100/2222

DECISION ON NEW NUCLEAR POWER PLANT TO BE MADE BY END OF 1983

Helsinki HELSINGIN SANOMAT in Finnish 9 Jul 82 p 19

[Article: "Imatran Voima Will Not Yield on Stand: Decision on Large-Scale Power Plant Must Be Reached Already During Next Year"]

[Text] The Imatran Voima power firm continues to hold to its stand that the decision concerning possible construction of a new large-scale nuclear generating plant must be made at the latest during 1983.

"The large plant will be needed during the 1990's and the decision needs to be made well in advance in order to avoid undue haste in the construction," says information secretary Klaus Raninen of the Imatran Voima administration.

According to a recently released committee report, the decisions are not that urgent and could be postponed at least until 1985. Even after that there would still remain 4 more years for further consideration if, in place of nuclear power, coal, peat, or increased importation of electricity is the choice.

This report was completed already a year and a half ago in the Energy Procurement Section of the Energy Policy Council, but was until now overshadowed by dissension within the Council.

The need for additional electric power production is based, according to Raninen, on a "very conservative concept" concerning the growth of consumption. Raninen says that the Imatran Voima construction schedule is based on a continuing consumption growth rate of 2 to 4 percent annually.

Raninen considers completely senseless the idea that the power firm is promoting the endeavor because of its own selfish interests. According to Raninen, the firm's designers have enough employment otherwise.

"Our foreign operations division is not able to accept all offers at this time because of full use of our designing capacity," says Raninen.

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NUCLEAR FIRMS' JOINT COMMITTEE BACKS PUTTING WASTE IN ROCKS

Helsinki UUSI SUOMI in Finnish 1 Jul 82 pp 6-7

[Article: "Joint Committee of Imatran Voima and Teollisuuden Voima Power Firms: Power Plant Wastes To Be Buried in Base Rock"]

[Text] The joint nuclear waste committee of the power firms considers that the base rock at Loviisa and at Olkiluoto are well suited for the disposal of power plant wastes. On 30 June the Imatran Voima and the Teollisuuden Voima power firms submitted their reports, which are based on studies extending over 3 years, to the Ministry of Trade and Industry.

The reports deal only with the disposal of low and medium active wastes that arise from the operation of nuclear power plants and with the final disposal of comparable discharge wastes. The reports do not at all deal with used fuels and the highly active wastes that they contain.

The used fuel from the Loviisa power plants of the Imatran Voima firm are returned to the Soviet Union, but the final disposition of the used fuels from the Olkiluoto power plants of the Teollisuuden Voima firm has not been resolved. The final disposition of the highly active wastes is clearly more problematical than that of the wastes with which the present reports are concerned.

To prepare these disposal site reports, field studies and comprehensive planning of the space needed for final disposal, as well as computations of the environmental effect of the permanently stored wastes were conducted in the field and at base rock formations at Loviisa and Olkiluoto.

No Urgency for Final Disposal

A pressing need for the final disposition of the wastes, or even of the decisions concerning the disposition, does not yet exist. According to Imatran Voima, the need for final disposal activity will not arise until the early 1990's. The time required for the detailed planning of the disposition, the obtaining of permits, and for the actual construction is estimated at 5 to 6 years.

The interim storage facility for the Teollisuuden Voima low active wastes is currently nearing completion. No precise time limit has been established for

the completion of the final disposal sites. The problem at this time involves only interim storage and optimal resolution of the final disposition. Final disposal activity will not be begun at Olkiluoto until the late 1990's.

Imatran Voima has prepared a report concerning the storage of its own wastes. In Sweden, an application for the construction of a joint final disposal site for four power plant locations is currently under consideration. The Imatran Voima and the Teollisuuden Voima firms, on the other hand, do not consider the advantages of a common disposal site to be of decisive importance.

The disposition of the waste in base rock envisioned by the two power firms has not been done anywhere in the world. The permit application in Sweden, however, concerns a solution similar in principle. Heikki Niininen of the Imatran Voima firm states that the same solution would have been adopted in many other countries if a similar terrain base were available.

In the United States and in France power plant wastes have been buried simply in a trench or pit excavated in the terrain. Among other measures, abandoned mines have been used in West Germany. Some countries have disposed of wastes by submergence in the ocean, in accordance with an agreement reached in OECD.

Pessimistic Assumptions

The power firms say that nearly all of their computations have been made on the basis of pessimistic assumptions. The assumed basic incidence in the safety analysis for the Loviisa locality is a chain in which the radioactivity of the wastes seeps from the final disposition site along with the ground water into the sea, thereby causing a radiation hazard to the local residents, for instance by way of seafoods. According to the Imatran Voima firm, in this instance the annual dosage of individuals subject to the maximum radiation would be less than one percent of one hundredth of the background radiation existing in nature. The Teollisuuden Voima firm likewise speaks in terms of a few hundredths of one percent.

The safety in the concept of the final disposition site of each of the firms is based on a number of factors serially placed preventing spread of the radioactive substance after the storage space is sealed. These factors include the type of packaging of the waste, the structures and fill material within the storage space, the nature of the base rock, and the biosphere.

Imatran Voima Suitable Base Rock Would Suffice

Thus far only a very small amount of power plant waste has been generated at the Loviisa location, amounting to only 100 cubic meters during 5 years. The report envisions the creation of 27,000 cubic meters of waste during 30 years of operation, with a planned reserve space of 20,000 cubic meters for the accumulating wastes.

The report recommends the placement of the wastes on Hastholmen island at a depth of 20 meters, on a location southwest of the power plants. The studies

indicated that the base rock is of a good quality, with the exception of two layers of somewhat fragmented rock lying in an almost horizontal position. The final storage space has been planned in a shallow depth to avoid these areas. According to Graduate Engineer Niininen, this was done partially "for psychological reasons only, because even the more fragmented base rock would have been safe."

The intent is to stabilize the wastes with concrete, and when necessary, additionally with crushed betonite as a fill material. The intention is to build the storage space in three phases, with each phase being adequate for a 10-year need. The cost estimate, at the current currency rate, is 34 million markkas for the first phase, 20 million markkas for the second, and 17 million markkas for the third. The estimated closing cost is 10 million markkas, and the annual operating cost is 0.5 million markkas.

Imatran Voima Disposal Less Costly

Because of the bituminous operations at Olkiluoto, the amount of waste to be generated during 30 years is estimated to amount to only 10,000 cubic meters. The report assumes 26,000 cubic meters for the dismantling wastes.

The final placement location here for the wastes is envisioned in the tonalite formation on Ulkopaa cape. The Teollisuuden Voima solution differs completely from the form of the storage spaces of the Imatran Voima. The wastes generated at Olkiluoto are packed into barrels which will be placed into a silo 44 meters high and 30 meters in diameter, with its bottom at a depth of 93 meters. The medium active metallic wastes will go into a separate hall at a depth of 60 meters. The spaces between the waste packagings will be filled with poured concrete.

The construction cost of the storage spaces is estimated at 30 million markkas, the annual operating costs at one million markkas, and the closing costs at 6 million markkas.

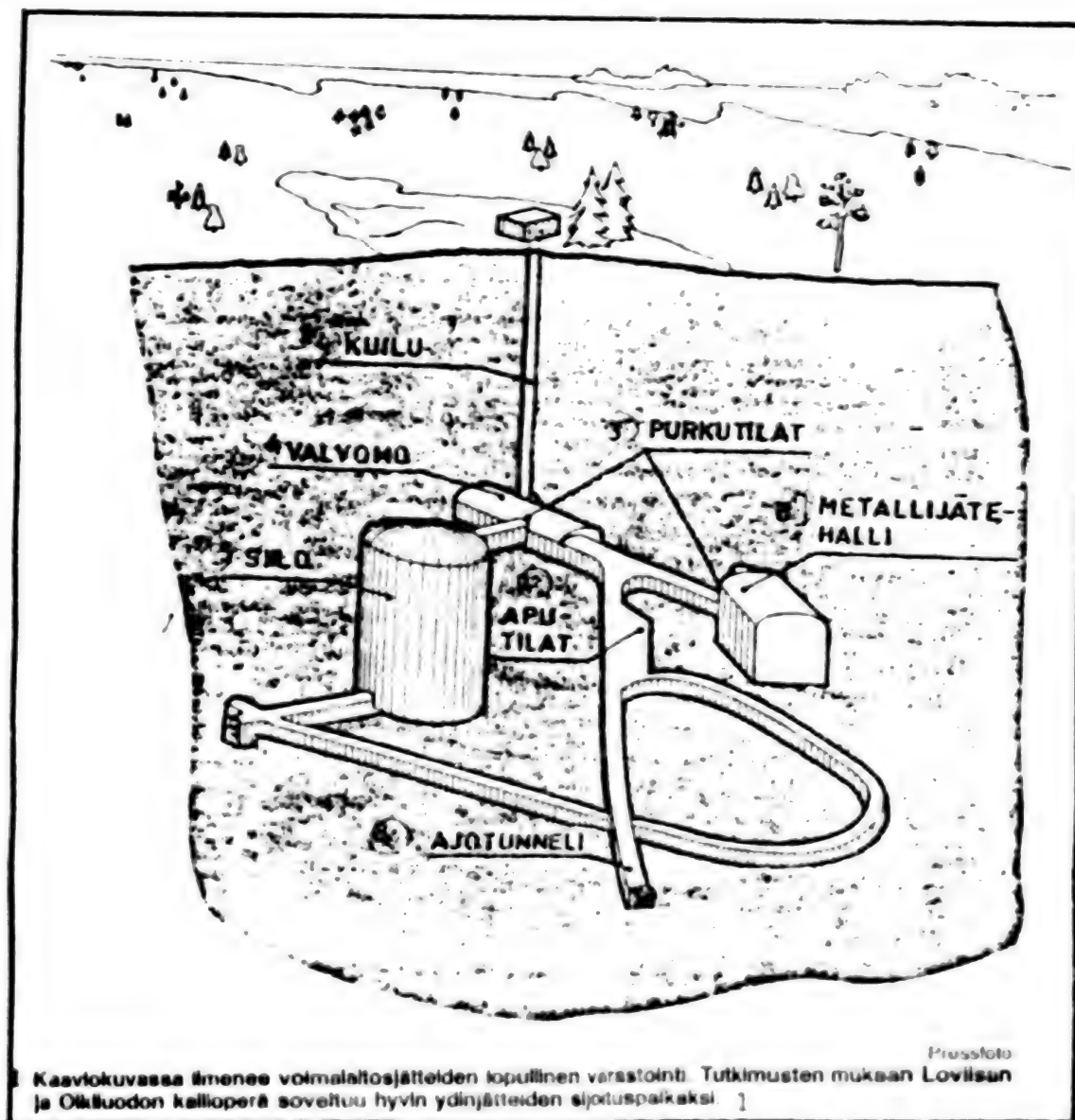
Space for Future Needs

The construction of the final disposition spaces for nuclear wastes will not be undertaken in the very near future. In addition to the fact that the matter is not considered urgent, there remains yet the procurement of the appropriate decisions and permits.

The power plant waste with which the report deals will remain radioactive mainly for several hundred years. However, the radioactivity of cobalt for instance decays in 100 years to one-millionth of its initial intensity.

Although the plans that the reports deal with concern the final disposition only of the wastes of the power plants already in operation, the representatives of both power firms stress the fact that enough space exists in the same base rock formation for the disposal of the waste from a new nuclear power plant.

Both Loviisa and Olkiluoto have been suggested as suitable sites for a possible future nuclear power plant.



Key:

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| (1) Diagram showing the final storage of power plant wastes. Studies indicate that the base rock formation at Loviisa and Olkiluoto is well suited as a storage place for nuclear wastes. | |
| (2) Shaft | (6) Metallic waste storage hall |
| (3) Unloading areas | (7) Auxiliary areas |
| (4) Control center | (8) Exit tunnel |
| (5) Silo | |

011: Tammilehto: Discharge Wastes Are Hazardous

Olli Tammilehto of the Energiapoliittinen Yhdistys -- Vaihtoehto Ydinvoimalle

[Energy Policy Association--An Alternative to Nuclear Power] says that some low and medium active wastes are relatively harmless as compared to the true problem nuclear wastes, the highly active substances. Tammilehto warns against creating an impression that the nuclear waste problem is now resolved.

"Of the topics covered in this report, the most problematical are the wastes encountered in the dismantling of the plants that have been retired from operation. Certain parts of the used reactors are quite radioactive--to the extent that in composition they may resemble spent fuels. Reliance is apparently placed on the assumption in the storing of these parts is that the radioactivity does not shift elsewhere from the metal. The half-life of certain isotopes, however, can be hundreds of thousands of years," warned Tammilehto.

The Energiapoliittinen Yhdistys has already on previous occasions criticized the use of bituminous substances in the storing of nuclear wastes. The Teollisuuden Voima, for instance, uses bitumin to stabilize wet wastes. Tammilehto points out that bitumin is structurally weak, subject to bacterial action, and is flammable.

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AEC REORGANIZES, INDUSTRIAL ORIENTATION STRESSED

Paris LE NOUVEL ECONOMISTE in French 21 Jun 82 p 64

[Article by Sophie Seroussi]

[Text] The ideas of Mr Jean-Pierre Chevenement, minister of research and technology, are taking hold. The Atomic Energy Commission (with 30,000 employees) is the first public agency to apply them, in accordance with the principles of the Law on Research Programming, soon to be discussed by the National Assembly: decentralization and concentration of a maximum effort on applied research. "Since 1970, date of the previous restructuring, the AEC's organization had aged," explains Mr Michel Pecqueur, general manager. "Being too complex and too hierarchical, it had ended up generating many bottlenecks." This reform affects the vertical and horizontal structures at the same time.

Vertical structures: The AEC's operational structures are organized into four institutes placed under the authority of the general administration. These four operational pivots include: the Directorate of Military Applications (DAM) which is the largest, budgetwise (45 percent) and also with respect to membership (36 percent), the Institute for Nuclear Protection and Security (IPSN), the Institute for Basic Research (IRF) and a newcomer, the Institute for Technological Research and Industrial Development (IRDI). This new institute, a leader in its field in Europe, has been entrusted to Mr Michel Rapin, 50-year-old "centralien [graduate of state engineering school]." One-fourth of the AEC's budget and personnel will be available to him.

Horizontal structures: In order to improve the cohesiveness of the AEC ensemble, a functional organization has been set up. It will supervise the four institutes and the many subsidiaries of the Commission.

Considering the increasingly industrial orientation of the commission, a new functional management has been set up: the Directorate of Strategy and Industrial Relations or DSRI. The government has decided it should be headed by the AEC's second in command: Mr Gerard Renon. A 42-year-old chief mining engineer, he was highly placed executive at Gaz de France before becoming an advisor at the Elysee Palace from May 1981 to April 1982. He has been with the AEC for less than 3 months.

Mr Renon will be expected to follow the main governmental orientations (priorities given to electronics, robotics and biotechnology.) The DSRI's role will be to coordinate and motivate. Mr Renon wants a small staff, consisting of 10 to 20 members and, with support from other structures within the group, capable of devoting itself--in Mr Pecqueur's words--"to business-like tasks."

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FRANCE

BRIEFS

FLAMANVILLE RESUMES WORK--The Council of State has just authorized resumption of work on the two high-voltage lines connecting the future nuclear plant at Flamanville (Manche) and the cities of Rennes and Caen. Work had been suspended on last 12 January by a decision of the Caen Administrative Court. The official recognition of public utility had been granted in July 1979 for the Flamanville-Caen line and in February 1980 for the Flamanville-Rennes line. Following a request by several municipalities in the Manche Department, and by farming and ecology organizations, recognition had been rescinded last January by the Administrative Court. The municipalities and organizations felt that the impact study performed by EDF [French Electric Company] was insufficient. [Text] [Paris LES ECHOS in French 15 Jul 82 p 8]

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